

CLAIMS

We claim:

1. A slit valve comprising:
 - a flange surface having an opening therein;
 - 5 a valve body having proximal and distal ends, said proximal end connected to said flange surface;
 - a first chamber formed in said valve body for accepting an inflation tube inserted through said opening in said flange surface;
 - a concave section located adjacent said first chamber; and
 - 10 a slit formed in the valve body connecting said concave section and said distal end.
2. The valve of claim 1, wherein said flange surface opening accepts a tip portion of the inflation tube and secures the tip in said valve.
3. The valve of claim 2, wherein upon passage of the tip portion of the
15 inflation tube through said flange surface opening, said opening engages a reduced diameter part of the tip of the inflation tube to secure the tip in said valve.
4. The valve of claim 1 further comprising a second chamber located between said first chamber and said concave section.
- 20 5. The valve of claim 1 further comprising a neck portion, wherein upon insertion a tip portion of the inflation tube engages said neck portion.
6. The valve of claim 5, wherein at least a portion of said neck portion substantially conforms to the shape of the tip portion of the inflation tube.
- 25 7. The valve of claim 1, wherein pressurized fluid flowing through the inflation tube causes said slit to open allowing fluid to pass therethrough and through said distal end of said valve body.
8. The valve of claim 1, wherein said distal end further comprises a concave section.
- 30 9. The valve of claim 8, wherein upon application of fluid pressure to the second concave section, the slit opens permitting fluid to pass therethrough and through said proximal end of said valve body.

10. The valve of claim 1, wherein the length of said slit corresponds to a desired opening pressure of the valve.
11. An implantable, inflatable apparatus comprising:
a slit valve, wherein said slit valve includes a flange surface having an opening therein, a valve body having proximal and distal ends, said proximal end connected to said flange surface, a first chamber formed in said valve body for accepting an inflation tube inserted through said opening in said flange surface, a concave section adjacent said first chamber, and a slit formed in the valve body connecting said concave section and said distal end.
12. The apparatus of claim 11, wherein the apparatus is a gastric balloon.
13. The apparatus of claim 11, wherein the apparatus is a mammary implant.
14. The apparatus of claim 11, wherein the apparatus is a tissue expander.
15. The apparatus of claim 11, wherein said flange surface opening accepts a tip portion of the inflation tube and secures the tip in said valve.
16. The apparatus of claim 15, wherein upon passage of the tip portion of the inflation tube through said flange surface opening, said opening engages a reduced diameter part of the tip of the inflation tube to secure the tip in said valve.
17. The apparatus of claim 15, wherein at least a portion of said first chamber substantially conforms to the shape of the tip portion of the inflation tube.
18. The apparatus of claim 11 further comprising a second chamber located between said first chamber and said concave section.
19. The apparatus of claim 11 further comprising a neck portion, wherein upon insertion, a tip portion of the inflation tube engages said neck portion.
20. The apparatus of claim 11, wherein pressurized fluid flowing through the inflation tube causes said slit to open allowing fluid to pass therethrough to said distal end.
21. The apparatus of claim 11, wherein said distal end further comprises a concave section.

22. The apparatus of claim 21, wherein upon application of fluid pressure to the concave section of said distal end, said slit opens permitting backflow through said valve.
23. The valve of claim 11, wherein the length of said slit corresponds to a desired opening pressure of the valve.
24. A medical apparatus for the treatment of obesity comprising:
an inflatable balloon formed of a suitable polymer material for insertion into the stomach;
a slit valve for communication of a fluid from an inflation tube to said balloon, wherein said slit valve includes a flange surface having an opening therein, a valve body having proximal and distal ends, said proximal end connected to said flange surface, a first chamber formed in said valve body for accepting the inflation tube inserted through said opening in said flange surface, a concave section located adjacent said first chamber, and a slit formed in the valve body connecting said concave section and said distal end.
25. The medical apparatus of claim 24, wherein said flange surface opening accepts a tip portion of the inflation tube and secures the tip in said valve.
26. The medical apparatus of claim 25, wherein upon passage of the tip portion of the inflation tube through said flange surface opening, said opening engages a reduced diameter part of the tip of the inflation tube to secure the tip in said valve.
27. The medical apparatus of claim 26, wherein at least a portion of said first chamber substantially conforms to the shape of the tip portion of the inflation tube.
28. The medical apparatus of claim 24 further comprising a second chamber located between said first chamber and said concave section.
29. The medical apparatus of claim 24 further comprising a neck portion, wherein upon insertion, a tip portion of the inflation tube engages a neck portion of the slit valve.
30. The medical apparatus of claim 24, wherein pressurized fluid flowing through the inflation tube causes said slit to open allowing fluid to pass therethrough and through said distal end of said valve body.

31. The medical apparatus of claim 30, wherein said distal end further comprises a concave section.
32. The medical apparatus of claim 31, wherein upon application of fluid pressure to the concave section of said distal end, said slit opens
5 permitting back flow through said valve.
33. The medical apparatus of claim 24, wherein the length of said slit corresponds to a desired opening pressure of the valve.
34. A two-way valve having first and second ends comprising:
10 a cylindrical valve body;
a slit formed in said valve body connecting the first and second ends of the two-way valve; and
a concave section formed on the first and second ends and connected by said slit.
35. The valve of claim 34, wherein upon application of fluid at a
15 predetermined pressure to one of said concave sections formed in the first or second end, said slit opens permitting fluid to pass therethrough and through to the other of the first or second end.